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Apparatus and Methods for Entropy-Encoding or Entropy-Decoding using an Initialization of Context Variables

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Field of the Invention

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The present invention relates to entropy encoding/decoding and, in particular, to entropy encoding/decoding of video signals using a context-based adaptive binary arithmetic coding scheme with initialization

Description of Related Art

Natural camera-view video signals as certain examples for general information signals show, as other information signals, a non-stationary statistical behavior. The statistics of these signals largely depend on the video content and the acquisition process. Traditional concepts of video coding that rely on a mapping from the video signal to a bit stream of variable length-coded syntax elements exploit some of the non-stationary characteristics but certainly not all of them. Moreover, higher-order statistical dependencies on a syntax element level are mostly neglected in existing video coding schemes.

In contrast to the variable length coding, which is also known as Huffman coding, there also exist arithmetic coding schemes, which are mostly binary arithmetic coding schemes for a practical implementation of coding a sequence of information symbols having binary symbols. Such binary symbols are taken from a symbol set which has only two symbols, i.e., a binary "1", and a binary "0". A simple arithmetic coding